

WHAT IS CLAIMED IS:

1 1. For use with a scalable video decoder capable of decoding
2 an incoming scalable video bit stream and generating a baseband
3 video signal, an apparatus for controlling a processing load of
4 said scalable video decoder comprising:

5 an analyzer circuit capable of measuring at least one
6 characteristic of said incoming scalable video bit stream and
7 generating at least one video parameter associated with said at
8 least one characteristic; and

9 a processor load controller capable of receiving said at
10 least one video parameter and, in response thereto, controlling a
11 level of decoding of said incoming scalable video bit stream
12 performed by said scalable video decoder.

1 2. The apparatus as set forth in Claim 1 wherein said at
2 least one video parameter indicates a level of motion of frames in
3 said incoming scalable video bit stream.

1 3. The apparatus as set forth in Claim 1 wherein said
2 wherein said at least one video parameter indicates a level of
3 detail of frames in said incoming scalable video bit stream.

1 4. The apparatus as set forth in Claim 1 wherein said
2 processor load controller is further capable of receiving a frame
3 type parameter associated with a first frame in said incoming
4 scalable video bit stream.

5 5. The apparatus as set forth in Claim 4 wherein said frame
6 type parameter comprises at least one of an I-frame parameter, a B-
7 frame parameter, and a P-frame parameter.

8 6. The apparatus as set forth in Claim 5 wherein said
9 processor load controller is further capable of receiving a source
10 type parameter associated with said first frame in said incoming
11 scalable video bit stream.

1 7. The apparatus as set forth in Claim 6 wherein said source
2 type parameter indicates whether said incoming scalable video bit
3 stream is one of a video bit stream and a film bit stream.

1 9. A video processing system comprising:
2 a buffer capable of receiving and storing an incoming
3 scalable video bit stream;
4 a scalable video decoder capable of decoding an incoming
5 scalable video bit stream and generating a baseband video signal,
6 said scalable video decoder comprising:
7 an apparatus for controlling a processing load of
8 said scalable video decoder comprising:
9 an analyzer circuit capable of measuring at least
10 one characteristic of said incoming scalable video bit stream
11 and generating at least one video parameter associated with
12 said at least one characteristic; and
13 a processor load controller capable of receiving
14 said at least one video parameter and, in response thereto,
15 controlling a level of decoding of said incoming scalable
16 video bit stream performed by said scalable video decoder; and
17 a display coupled to said scalable video decoder capable
18 of displaying said baseband video signal.

1 10. The video processing system as set forth in Claim 9
2 wherein said at least one video parameter indicates a level of
3 motion of frames in said incoming scalable video bit stream.

1 11. The video processing system as set forth in Claim 9
2 wherein said wherein said at least one video parameter indicates a
3 level of detail of frames in said incoming scalable video bit
4 stream.

1 12. The video processing system as set forth in Claim 9
2 wherein said processor load controller is further capable of
3 receiving a frame type parameter associated with a first frame in
4 said incoming scalable video bit stream.

1 13. The video processing system as set forth in Claim 12
2 wherein said frame type parameter comprises at least one of an I-
3 frame parameter, a B-frame parameter, and a P-frame parameter.
4

1 14. The video processing system as set forth in Claim 13
2 wherein said processor load controller is further capable of
3 receiving a source type parameter associated with said first frame
4 in said incoming scalable video bit stream.

1 15. The video processing system as set forth in Claim 14
2 wherein said source type parameter indicates whether said incoming
3 scalable video bit stream is one of a video bit stream and a film
4 bit stream

1 16. The video processing system as set forth in Claim 9
2 wherein said processor load controller generates at least one scale
3 factor capable of controlling a level of decoding performed by said
4 scalable video decoder.

1 17. For use with a scalable video decoder capable of decoding
2 an incoming scalable video bit stream and generating a baseband
3 video signal, a method for controlling a processing load of the
4 scalable video decoder comprising the steps of:

5 measuring at least one characteristic of the incoming
6 scalable video bit stream;

7 generating at least one video parameter associated with
8 the at least one characteristic;

9 in response to a value of the at least one video
10 parameter controlling a level of decoding of the incoming scalable
11 video bit stream performed by the scalable video decoder.

12 18. The method as set forth in Claim 17 wherein the at least
13 one video parameter indicates a level of motion of frames in the
14 incoming scalable video bit stream.

15 19. The method as set forth in Claim 17 wherein the wherein
16 the at least one video parameter indicates a level of detail of
17 frames in the incoming scalable video bit stream.

1 20. The method as set forth in Claim 17 further comprising
2 the steps of:

3 determining a frame type parameter associated with a
4 first frame in the incoming scalable video bit stream;

5 in response to a value of the at least one frame type
6 parameter, controlling a level of decoding of the incoming scalable
7 video bit stream performed by the scalable video decoder.

21. The method as set forth in Claim 20 wherein the frame
type parameter comprises at least one of an I-frame parameter, a B-
frame parameter, and a P-frame parameter.